



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/921,467	08/03/2001	Timothy L. Goldstein	10007816-1	7037

7590 03/30/2006

HEWLETT-PACKARD COMPANY  
Intellectual Property Administration  
P.O. Box 272400  
Fort Collins, CO 80527-2400

EXAMINER

PATEL, ASHOKKUMAR B

ART UNIT

PAPER NUMBER

2154

DATE MAILED: 03/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/921,467	GOLDSTEIN, TIMOTHY L.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Ashok B. Patel	2154	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 12 January 2006.
- 2a) This action is FINAL.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 30 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-29 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

## DETAILED ACTION

1. Claims 1-30 are subject to examination. Claim 30 is cancelled.

### *Response to Arguments*

2. Applicant's arguments with respect to claims 1-30 have been considered but are moot in view of the new ground(s) of rejection.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless-

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-4, 6-18, 20, 21 and 23-29 are rejected under 35 U.S.C. 102(e) as being anticipated by Minakuchi et al. (hereinafter Minakuchi)(US 2001/0002365 A1).

#### **Referring to claim 1,**

Minakuchi teaches an electronic device having digital data stored (Fig. 4, element 405), thereon, said electronic device comprising:

a packetizer for manipulating said digital data into a plurality of packets (para.[0087], "Data that is the subject of communication, and the program and data to drive the data communication device and the data communication terminal are stored in main storage unit 405. Data is read in, written, erased, or the like with respect to main storage unit 405 by control unit 402.", and "para.[0091] FIG. 5 represents the format of

data handled in the data communication method of the present invention. The data is formed of two portions, i.e., a header 501 and a data body 502.");

a communication controller for opportunistically establishing communication between said electronic device and at least one remote transport device (Fig. 11, elements 1101-1105," para. [0165] FIG. 11 is a flow chart representing a control flow of the process for the data communication terminal to switch between a transmission mode and a reception mode. Description is provided hereinafter based on a data communication terminal having the structure represented by the block diagram of FIG.

4. In the process of the flow chart of FIG. 11, steps corresponding to those of the flow chart of FIG. 6 have the same step number allotted. Detailed description thereof will not be repeated where appropriate. [0166] At S1101, a command to turn on the power is input from input unit 401 of the data communication terminal, whereby the process is initiated. [0167] At S1102, control unit 402 determines whether data transmission from the data communication terminal is possible or not. This determination is based on whether there is one or more data not locked in the data communication terminal. When data transmission is possible (YES at S102), the process proceeds to S603. When data transmission is not possible (NO at S1102), the process proceeds to S1107. [0168] At S1105, control unit 402 carries out a data transmission process. This process will be described in detail with reference to FIG. 12 afterwards.", Fig. 12, para.[0172]); and

a transceiver for singly transmitting copies of said packets to said at least one remote transport device and receiving communication signals from ones of said at least

one remote transport devices to manage memory resources for the electronic device.

(Fig. 4, elements 403, 404, Fig. 12 flow chart, elements 901-909)

**Referring to claim 2,**

Minakuchi teaches the electronic device of claim 1 further comprising:

a memory controller for singly deleting said digital data that corresponds to said transmitted copies of said packets. (Fig. 5, Fig. 12, element 909)

**Referring to claim 3,**

Minakuchi teaches the electronic device of claim 1 further comprising: an interactive memory controller wherein a user selects ones of said digital data corresponding to said transmitted copies of said packets for deletion. (para. [0202] At S2306, control unit 402 carries out the process corresponding to the selection of the action "capture". The flag to lock the stored data is rendered to a set state in order to prevent the pet data stored in the main storage unit from being transmitted to another data communication terminal." And "para. [0167] At S1102, control unit 402 determines whether data transmission from the data communication terminal is possible or not. This determination is based on whether there is one or more data not locked in the data communication terminal.")

**Referring to claim 4,**

Minakuchi teaches the electronic device of claim 1 wherein said at least one remote transport device comprises:

a connection to a communication network (Fig. 1)

a transceiver for facilitating communication with external devices; (Fig.4, elements 403, 404), and

a data processor for sending ones of said transmitted copies of said packets over said communication network. (para.[0058])

**Referring to claim 6,**

Minakuchi teaches the electronic device of claim 1 wherein said transceiver is a wireless personal area network (WPAN) transmitter. (Fig. 1, para.[0059])

**Referring to claim 7,**

Minakuchi teaches the electronic device of claim 1 wherein said transceiver sends multiple copies of each transmitted packet. (para.[0067] A range 112 represented by an ellipse is the range where communication is allowed between data communication terminal 107 and data communication terminal 108. Here, data is transmitted from data communication terminal 107 to data communication terminal 108.

[0068] Data communication terminals 105, 106, 107, 108 and 109 are owned by individuals 114, 115, 116, 117 and 118, respectively. A data communication system is built dynamically by these moving individuals each carrying a data communication terminal and carrying out data transmission/reception with another data communication device or data communication terminal that is newly in close proximity.", Fig. 12)

**Referring to claim 8,**

Minakuchi teaches the electronic device of claim 1 wherein said memory controller receives a signal acknowledging receipt of said transmitted copy before singly deleting said packet. (Fig. 12. elements 907, 908 and 909)

**Referring to claims 9 and 10,**

Minakuchi teaches the electronic device of claim 1 further comprising: a switch for deactivating said transceiver, and the electronic device of claim 9 wherein said switch is selectable by a user.(para,[166] and [0167])

**Referring to claim 11,**

Minakuchi teaches the electronic device of claim 1 further comprising: a file manager providing a user options for selecting ones of said digital data for transmission from said device. (para [0167] At S1102, control unit 402 determines whether data transmission from the data communication terminal is possible or not. This determination is based on whether there is one or more data not locked in the data communication terminal. When data transmission is possible (YES at S102), the process proceeds to S603. When data transmission is not possible (NO at S1102), the process proceeds to S1107.", para. [0202] At S2306, control unit 402 carries out the process corresponding to the selection of the action "capture". The flag to lock the stored data is rendered to a set state in order to prevent the pet data stored in the main storage unit from being transmitted to another data communication terminal."

**Referring to claim 12,**

Minakuchi teaches a method for managing memory resources on an electronic device comprising the steps of:

packetizing data stored on said electronic device ((para.[0087],"Data that is the subject of communication, and the program and data to drive the data communication device and the data communication terminal are stored in main storage unit 405. Data

is read in, written, erased, or the like with respect to main storage unit 405 by control unit 402.", and "[0091] FIG. 5 represents the format of data handled in the data communication method of the present invention. The data is formed of two portions, i.e., a header 501 and a data body 502.")

opportunistically establishing a communication link with at least one neighboring electronic device ((Fig. 11, elements 1101-1105," [0165] FIG. 11 is a flow chart representing a control flow of the process for the data communication terminal to switch between a transmission mode and a reception mode. Description is provided hereinafter based on a data communication terminal having the structure represented by the block diagram of FIG. 4. In the process of the flow chart of FIG. 11, steps corresponding to those of the flow chart of FIG. 6 have the same step number allotted. Detailed description thereof will not be repeated where appropriate. [0166] At S1101, a command to turn on the power is input from input unit 401 of the data communication terminal, whereby the process is initiated. [0167] At S1102, control unit 402 determines whether data transmission from the data communication terminal is possible or not. This determination is based on whether there is one or more data not locked in the data communication terminal. When data transmission is possible (YES at S102), the process proceeds to S603. When data transmission is not possible (NO at S1102), the process proceeds to S1107. [0168] At S1105, control unit 402 carries out a data transmission process. This process will be described in detail with reference to FIG. 12 afterwards.", Fig. 12, para.[0172]);

transmitting a copy of a single packet to said at least one neighboring electronic device; and communicating said transmitted copy from said at least one neighboring electronic device to a collection host. (Fig. 1, [0059] The data communication device is connected to a network 104 such as the Internet to receive data transmitted through network 104. A data communication device can receive data from a data communication terminal to transmit the received data to another data communication device through network 104, and the data can be transmitted from that data communication device to another data communication terminal.", [0225] At S2318, control unit 402 transmits data according to the process of S1013 of FIG. 10 with respect to the household appliance capable of receiving virtual pet data. When transmission is completed, the pet data is erased from the main storage unit of the data communication terminal. FIG. 22 corresponds to the case of transferring virtual pet data to a household apparatus from the data communication terminal. The virtual pet data stored in data communication terminal 2201 is transmitted to a television 2203 in response to a command by an individual 2202. Individual 2202 moves data communication terminal 2201 close to television 2203 and selects "forward" through display unit 1603 of FIG. 21, whereby the virtual pet data is transferred from the data communication terminal to the television. [0226] In the present invention, desired virtual pet data can be locked to prevent transfer to another data communication terminal when the virtual pet data drops in. When the number of favored data increases so that the number of locked data arrives at the total number of data that can be saved, the virtual pet data is to be transferred to a household apparatus. Accordingly, new pet data can

be received without discarding the current data even if the number of data that can be stored in the data communication terminal is limited. [0227] By establishing a network for the household apparatus, pet data can be transferred among data communication devices connected to the network. )

**Referring to claim 13,**

Minakuchi teaches the method of claim 12 further comprising the step of deleting said data corresponding to said single packet after said associated copy is transmitted (Fig. 5, Fig.12, element 909)

**Referring to claim 14,**

Minakuchi teaches the method of claim 12 further comprising the step of selectively deleting said data corresponding to said single packet after said associated copy is transmitted. (para. [0202] At S2306, control unit 402 carries out the process corresponding to the selection of the action "capture". The flag to lock the stored data is rendered to a set state in order to prevent the pet data stored in the main storage unit from being transmitted to another data communication terminal." And "para. [0167] At S1102, control unit 402 determines whether data transmission from the data communication terminal is possible or not. This determination is based on whether there is one or more data not locked in the data communication terminal.")

**Referring to claim 15,**

Minakuchi teaches the method of claim 12 wherein said establishing step comprises the steps of:

broadcasting a hail within a transmission radius centered about said electronic device (para. [0072] As mentioned above, data communication terminal 202 is a portable telephone, PHS, PDA or the like that can execute the data communication method of the present invention. Data communication terminal 202 is owned by an individual 203.[0073] When data communication terminal 202 enters range 204 where communication with data communication device 201 is allowed, and also into range 205 where communication with data communication terminal 202 is allowed, communication according to the data communication method of the present invention is allowed there between.", para. [0135] At S901, control unit 402 transmits the header portion alone of the transmission data to the data communication device or the data communication terminal of the reception side.");

receiving reply transmissions from at least one neighboring electronic device within said transmission radius;( Fig. 12, elements S902-S904) and

creating a data channel between said electronic device and said at least one neighboring electronic device. (Fig. 12, elements S904-S906)

**Referring to claim 16,**

Minakuchi teaches the method of claim 12 further comprising the step of transmitting additional copies of said single packet to other of said at least one neighboring electronic device. (para. [0067] A range 112 represented by an ellipse is the range where communication is allowed between data communication terminal 107 and data communication terminal 108. Here, data is transmitted from data communication terminal 107 to data communication terminal 108. [0068] Data

communication terminals 105, 106, 107, 108 and 109 are owned by individuals 114, 115, 116, 117 and 118, respectively. A data communication system is built dynamically by these moving individuals each carrying a data communication terminal and carrying out data transmission/reception with another data communication device or data communication terminal that is newly in close proximity.", Fig. 12).

**Referring to claim 17,**

Minakuchi teaches the method of claim 12 further comprising the steps of: issuing an acknowledgment from said collection host addressed to said electronic device ; receiving said acknowledgment; and performing said deleting step after said receiving step. (Fig. 12, elements S907-S909)

**Referring to claim 18,**

Minakuchi teaches the method of claim 12 further comprising the step of: reassembling said received packets at said collection host into a copy of said data stored on said electronic device. (para. [0225] At S2318, control unit 402 transmits data according to the process of S1013 of FIG. 10 with respect to the household appliance capable of receiving virtual pet data. When transmission is completed, the pet data is erased from the main storage unit of the data communication terminal. FIG. 22 corresponds to the case of transferring virtual pet data to a household apparatus from the data communication terminal. The virtual pet data stored in data communication terminal 2201 is transmitted to a television 2203 in response to a command by an individual 2202. Individual 2202 moves data communication terminal 2201 close to television 2203 and selects "forward" through display unit 1603 of FIG. 21, whereby the

virtual pet data is transferred from the data communication terminal to the television. [0226] In the present invention, desired virtual pet data can be locked to prevent transfer to another data communication terminal when the virtual pet data drops in. When the number of favored data increases so that the number of locked data arrives at the total number of data that can be saved, the virtual pet data is to be transferred to a household apparatus. Accordingly, new pet data can be received without discarding the current data even if the number of data that can be stored in the data communication terminal is limited. [0227] By establishing a network for the household apparatus, pet data can be transferred among data communication devices connected to the network.")

**Referring to claim 20,**

Minakuchi teaches the method of claim 12 further comprising the step of: checking said transmitted copy for errors.(Fig. 12, element S907 and timeout)

**Referring to claim 21,**

Minakuchi teaches a system of managing memory resources on an electronic device comprising:

means for packetizing original data stored on said memory resources (para.[0087],"Data that is the subject of communication, and the program and data to drive the data communication device and the data communication terminal are stored in main storage unit 405. Data is read in, written, erased, or the like with respect to main storage unit 405 by control unit 402.", and "para. [0091] FIG. 5 represents the format of data handled in the data communication method of the present invention. The data is formed of two portions, i.e., a header 501 and a data body 502.")

means for hailing surrounding transport devices (para. [0067] A range 112 represented by an ellipse is the range where communication is allowed between data communication terminal 107 and data communication terminal 108. Here, data is transmitted from data communication terminal 107 to data communication terminal 108. [0068] Data communication terminals 105, 106, 107, 108 and 109 are owned by individuals 114, 115, 116, 117 and 118, respectively. A data communication system is built dynamically by these moving individuals each carrying a data communication terminal and carrying out data transmission/reception with another data communication device or data communication terminal that is newly in close proximity.", Fig. 12).

means for establishing communication channels with ones of said surrounding transport devices responding to said hail (Fig. 11, elements 1101-1105," para. [0165] FIG. 11 is a flow chart representing a control flow of the process for the data communication terminal to switch between a transmission mode and a reception mode. Description is provided hereinafter based on a data communication terminal having the structure represented by the block diagram of FIG. 4. In the process of the flow chart of FIG. 11, steps corresponding to those of the flow chart of FIG. 6 have the same step number allotted. Detailed description thereof will not be repeated where appropriate. [0166] At S1101, a command to turn on the power is input from input unit 401 of the data communication terminal, whereby the process is initiated. [0167] At S1102, control unit 402 determines whether data transmission from the data communication terminal is possible or not. This determination is based on whether there is one or more data not locked in the data communication terminal. When data transmission is possible (YES at

S102), the process proceeds to S603. When data transmission is not possible (NO at S1102), the process proceeds to S1107. [0168] At S1105, control unit 402 carries out a data transmission process. This process will be described in detail with reference to FIG. 12 afterwards.", Fig. 12, para.[0172])

means for singly transmitting copies of said packets to said ones of said surrounding transport devices (Fig. 12) means for forwarding said singly transmitted copies from said surrounding transport devices to a collection point; and means at said collection point for reassembling said forwarded copies into a copy of said original data. (Fig. 1, para. [0059] The data communication device is connected to a network 104 such as the Internet to receive data transmitted through network 104. A data communication device can receive data from a data communication terminal to transmit the received data to another data communication device through network 104, and the data can be transmitted from that data communication device to another data communication terminal.", para. [0225] At S2318, control unit 402 transmits data according to the process of S1013 of FIG. 10 with respect to the household appliance capable of receiving virtual pet data. When transmission is completed, the pet data is erased from the main storage unit of the data communication terminal. FIG. 22 corresponds to the case of transferring virtual pet data to a household apparatus from the data communication terminal. The virtual pet data stored in data communication terminal 2201 is transmitted to a television 2203 in response to a command by an individual 2202. Individual 2202 moves data communication terminal 2201 close to television 2203 and selects "forward" through display unit 1603 of FIG. 21, whereby the

virtual pet data is transferred from the data communication terminal to the television. [0226] In the present invention, desired virtual pet data can be locked to prevent transfer to another data communication terminal when the virtual pet data drops in. When the number of favored data increases so that the number of locked data arrives at the total number of data that can be saved, the virtual pet data is to be transferred to a household apparatus. Accordingly, new pet data can be received without discarding the current data even if the number of data that can be stored in the data communication terminal is limited. [0227] By establishing a network for the household apparatus, pet data can be transferred among data communication devices connected to the network.")

**Referring to claim 23,**

Minakuchi teaches the system of claim 20 further comprising: means for selectively deleting portions of said original data corresponding to said transmitted copies of said packets. (para. [0202] At S2306, control unit 402 carries out the process corresponding to the selection of the action "capture". The flag to lock the stored data is rendered to a set state in order to prevent the pet data stored in the main storage unit from being transmitted to another data communication terminal." And "para. [0167] At S1102, control unit 402 determines whether data transmission from the data communication terminal is possible or not. This determination is based on whether there is one or more data not locked in the data communication terminal.")

**Referring to claim 24,**

Minakuchi teaches the system of claim 21 further comprising: means for checking errors in said forwarded copies. (Fig. 12, element S907 and timeout)

**Referring to claim 25,**

Minakuchi teaches the system of claim 1 wherein the communications controller opportunistically establishes communication by: issuing a general hail to a plurality of different remote transport devices to find remote transport devices within a communications range of said electronic device; and connecting with at least one remote transport device while in the communications range. (Fig.12, elements S901-S903, para. [0067] A range 112 represented by an ellipse is the range where communication is allowed between data communication terminal 107 and data communication terminal 108. Here, data is transmitted from data communication terminal 107 to data communication terminal 108. [0068] Data communication terminals 105, 106, 107, 108 and 109 are owned by individuals 114, 115, 116, 117 and 118, respectively. A data communication system is built dynamically by these moving individuals each carrying a data communication terminal and carrying out data transmission/reception with another data communication device or data communication terminal that is newly in close proximity.", Fig. 12).

**Referring to claim 26,**

Minakuchi teaches the system of claim 25 wherein the communications controller opportunistically establishes communication by connecting with the remote transport device if a user of said electronic device passes within the communications range. (para. [0067] A range 112 represented by an ellipse is the range where communication is allowed between data communication terminal 107 and data communication terminal 108. Here, data is transmitted from data communication terminal 107 to data

communication terminal 108. [0068] Data communication terminals 105, 106, 107, 108 and 109 are owned by individuals 114, 115, 116, 117 and 118, respectively. A data communication system is built dynamically by these moving individuals each carrying a data communication terminal and carrying out data transmission/reception with another data communication device or data communication terminal that is newly in close proximity.", Fig. 12, Figs. 1 and 2).

**Referring to claim 27,**

Minakuchi teaches the system of claim 26 wherein the communications controller opportunistically establishes communication by connecting with another remote transport device before the user of said electronic device leaves the communications range. (Fig. 11, elements 1101-1105," para. [0165] FIG. 11 is a flow chart representing a control flow of the process for the data communication terminal to switch between a transmission mode and a reception mode. Description is provided hereinafter based on a data communication terminal having the structure represented by the block diagram of FIG. 4. In the process of the flow chart of FIG. 11, steps corresponding to those of the flow chart of FIG. 6 have the same step number allotted. Detailed description thereof will not be repeated where appropriate. [0166] At S1101, a command to turn on the power is input from input unit 401 of the data communication terminal, whereby the process is initiated. [0167] At S1102, control unit 402 determines whether data transmission from the data communication terminal is possible or not. This determination is based on whether there is one or more data not locked in the data communication terminal. When data transmission is possible (YES at S102), the

process proceeds to S603. When data transmission is not possible (NO at S1102), the process proceeds to S1107. [0168] At S1105, control unit 402 carries out a data transmission process. This process will be described in detail with reference to FIG. 12 afterwards.", Fig. 12, para.[0172], ([0067] A range 112 represented by an ellipse is the range where communication is allowed between data communication terminal 107 and data communication terminal 108. Here, data is transmitted from data communication terminal 107 to data communication terminal 108. [0068] Data communication terminals 105, 106, 107, 108 and 109 are owned by individuals 114, 115, 116, 117 and 118, respectively. A data communication system is built dynamically by these moving individuals each carrying a data communication terminal and carrying out data transmission/reception with another data communication device or data communication terminal that is newly in close proximity.", Fig. 12, Figs. 1 and 2).

**Referring to claim 28,**

Minakuchi teaches the system of claim 12 wherein opportunistically establishes communication includes: searching for neighboring electronic devices within a communications range of said electronic device; and connecting with at least one of neighboring electronic devices while in the communications range.(Fig. 11, elements 1101-1105," para. [0165] FIG. 11 is a flow chart representing a control flow of the process for the data communication terminal to switch between a transmission mode and a reception mode. Description is provided hereinafter based on a data communication terminal having the structure represented by the block diagram of FIG. 4. In the process of the flow chart of FIG. 11, steps corresponding to those of the flow

chart of FIG. 6 have the same step number allotted. Detailed description thereof will not be repeated where appropriate. [0166] At S1101, a command to turn on the power is input from input unit 401 of the data communication terminal, whereby the process is initiated. [0167] At S1102, control unit 402 determines whether data transmission from the data communication terminal is possible or not. This determination is based on whether there is one or more data not locked in the data communication terminal. When data transmission is possible (YES at S102), the process proceeds to S603. When data transmission is not possible (NO at S1102), the process proceeds to S1107. [0168] At S1105, control unit 402 carries out a data transmission process. This process will be described in detail with reference to FIG. 12 afterwards.", Fig. 12, para.[0172], ([0067] A range 112 represented by an ellipse is the range where communication is allowed between data communication terminal 107 and data communication terminal 108. Here, data is transmitted from data communication terminal 107 to data communication terminal 108. [0068] Data communication terminals 105, 106, 107, 108 and 109 are owned by individuals 114, 115, 116, 117 and 118, respectively. A data communication system is built dynamically by these moving individuals each carrying a data communication terminal and carrying out data transmission/reception with another data communication device or data communication terminal that is newly in close proximity.", Fig. 12, Figs. 1 and 2).

**Referring to claim 29,**

Minakuchi teaches the system of claim 28 wherein opportunistically establishing a communication link includes connecting with another neighboring electronic device if

said electronic device is moved out of the communication range. (Fig. 11, elements 1101-1105," para. [0165] FIG. 11 is a flow chart representing a control flow of the process for the data communication terminal to switch between a transmission mode and a reception mode. Description is provided hereinafter based on a data communication terminal having the structure represented by the block diagram of FIG.

4. In the process of the flow chart of FIG. 11, steps corresponding to those of the flow chart of FIG. 6 have the same step number allotted. Detailed description thereof will not be repeated where appropriate. [0166] At S1101, a command to turn on the power is input from input unit 401 of the data communication terminal, whereby the process is initiated. [0167] At S1102, control unit 402 determines whether data transmission from the data communication terminal is possible or not. This determination is based on whether there is one or more data not locked in the data communication terminal. When data transmission is possible (YES at S102), the process proceeds to S603. When data transmission is not possible (NO at S1102), the process proceeds to S1107. [0168] At S1105, control unit 402 carries out a data transmission process. This process will be described in detail with reference to FIG. 12 afterwards.", Fig. 12, para.[0172], ([0067] A range 112 represented by an ellipse is the range where communication is allowed between data communication terminal 107 and data communication terminal 108. Here, data is transmitted from data communication terminal 107 to data communication terminal 108. [0068] Data communication terminals 105, 106, 107, 108 and 109 are owned by individuals 114, 115, 116, 117 and 118, respectively. A data communication system is built dynamically by these moving individuals each carrying a

data communication terminal and carrying out data transmission/reception with another data communication device or data communication terminal that is newly in close proximity.", Fig. 12, Figs. 1 and 2).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 5, 19 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Minakuchi et al. (hereinafter Minakuchi)(US 2001/0002365 A1) in view of Ito et al. (hereinafter Ito) (US 6, 967, 675) .

Referring to claim 5,

Keeping in mind the teachings of Minakuchi as stated above, Minakuchi fails to teach the electronic device of claim 1 wherein said memory controller saves a reduced representation of said digital data.

Ito teaches "wherein said memory controller saves a reduced representation of said digital data." (col. 2, line 42-59)The recording medium records an image file including a main-image signal and a size-reduce image signal of a subject taken. When a transmitter transmits to an external storage device the image file recorded in the recording medium, a storage stores in a nonvolatile memory area the size-reduced image signal included in this image file. Also, an eraser erases from the recording medium the image file transmitted."

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made to implement the teachings of Ito to the transmitting device of Minakuchi "because the image files recorded in the recording medium is stored in the externally provided storage device in this manner, the operator can continue to take pictures without paying attention to the capacity of recording medium. Also, the transmitted image files are erased leaving size-reduced image signals, it is possible for the operator to omit the labor and time of manually erasing the image files. Further, the content of the image files stored in the external storage device can be easily confirmed by the size-reduced image signals." As taught by Ito.

**Referring to claim 19,**

Keeping in mind the teachings of Minakuchi as stated above, Minakuchi fails to teach the method of claim 12 further comprising the steps of: partially reassembling said packets at said electronic device into a thumbnail version of said data stored on said electronic device prior to said deleting step; and storing said thumbnail version on said electronic device.

Ito teaches "partially reassembling said packets at said electronic device into a thumbnail version of said data stored on said electronic device prior to said deleting step; and storing said thumbnail version on said electronic device." (col. 2, line 42-59) The recording medium records an image file including a main-image signal and a size-reduce image signal of a subject taken. When a transmitter transmits to an external storage device the image file recorded in the recording medium, a storage stores in a nonvolatile memory area the size-reduced image signal included in this

image file. Also, an eraser erases from the recording medium the image file transmitted.”)

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made to implement the teachings of Ito to the transmitting device of Minakuchi “because the image files recorded in the recording medium is stored in the externally provided storage device in this manner, the operator can continue to take pictures without paying attention to the capacity of recording medium. Also, the transmitted image files are erased leaving size-reduced image signals, it is possible for the operator to omit the labor and time of manually erasing the image files. Further, the content of the image files stored in the external storage device can be easily confirmed by the size-reduced image signals.” As taught by Ito.

**Referring to claim 22,**

Keeping in mind the teachings of Minakuchi as stated above, Minakuchi fails to teach the system of claim 20 further comprising: means for saving reduced copies of said original data from ones of said packets corresponding to said transmitted copies.

Ito teaches “the system of claim 20 further comprising: means for saving reduced copies of said original data from ones of said packets corresponding to said transmitted copies.” (col. 2, line 42-59) The recording medium records an image file including a main-image signal and a size-reduce image signal of a subject taken. When a transmitter transmits to an external storage device the image file recorded in the recording medium, a storage stores in a nonvolatile memory area the size-reduced

image signal included in this image file. Also, an eraser erases from the recording medium the image file transmitted.”)

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made to implement the teachings of Ito to the transmitting device of Minakuchi “because the image files recorded in the recording medium is stored in the externally provided storage device in this manner, the operator can continue to take pictures without paying attention to the capacity of recording medium. Also, the transmitted image files are erased leaving size-reduced image signals, it is possible for the operator to omit the labor and time of manually erasing the image files. Further, the content of the image files stored in the external storage device can be easily confirmed by the size-reduced image signals.” As taught by Ito.

### ***Conclusion***

**Examiner's note:** Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ashok B. Patel whose telephone number is (571) 272-3972. The examiner can normally be reached on 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John A. Follansbee can be reached on (571) 272-3964. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



JOHN FOLLANSBEE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100